

WHAT IS CLAIMED IS:

1. A power converter module adapted to provide a regulated direct current voltage to a load, said power converter module comprising:

5 a rectifier having first and second rectifier terminals adapted to be coupled electrically to an external alternating current power source, a third rectifier terminal connected electrically to a first node, and a fourth rectifier terminal connected
10 electrically to a grounded node;

 a metal thin film capacitor adapted to interconnect one of said first and second rectifier terminals of said rectifier to the external alternating current power source; and

15 a voltage regulating circuit adapted to interconnect said rectifier to the load, said voltage regulating circuit including

 a limiting resistor having a first resistor terminal connected electrically to said first node,
20 and a second resistor terminal connected electrically to a second node,

 a first filter capacitor having a first capacitor terminal connected electrically to a third node, and a second capacitor terminal connected
25 electrically to said grounded node, and

 a voltage regulator interconnecting said second and third nodes, and having a regulator terminal

connected electrically to said grounded node,

wherein the regulated direct current voltage is provided to the load through said third and grounded nodes.

5 2. The power converter module as claimed in Claim 1, further comprising a second filter capacitor that has a first capacitor terminal connected electrically to said first node, and a second capacitor terminal connected electrically to said grounded node.

10 3. The power converter module as claimed in Claim 1, wherein said voltage regulator is a Zener diode.

4. The power converter module as claimed in Claim 1, wherein said voltage regulator is an integrated circuit.

15 5. The power converter module as claimed in Claim 1, wherein said metal thin film capacitor is made from zinc.

6. The power converter module as claimed in Claim 1, wherein said metal thin film capacitor has first and
20 second capacitor terminals, each of said first and second capacitor terminals of said metal thin film capacitor being made from silver plated copper.

7. The power converter module as claimed in Claim 1, wherein said rectifier is a full-wave diode bridge
25 rectifier.

8. A fan assembly comprising:

a direct current brushless fan motor; and

a power converter module for providing a regulated direct current voltage to said direct current brushless fan motor, said power converter module including:

5 a rectifier having first and second rectifier terminals adapted to be coupled electrically to an external alternating current power source, a third rectifier terminal connected electrically to a first node, and a fourth rectifier terminal connected
10 electrically to a grounded node;

 a metal thin film capacitor adapted to interconnect one of said first and second rectifier terminals of said rectifier to the external alternating current power source; and

15 a voltage regulating circuit adapted to interconnect said rectifier to said direct current brushless fan motor, said voltage regulating circuit including

 a limiting resistor having a first resistor
20 terminal connected electrically to said first node, and a second resistor terminal connected electrically to a second node,

 a first filter capacitor having a first
25 capacitor terminal connected electrically to a third node, and a second capacitor terminal connected electrically to said grounded node, and

 a voltage regulator interconnecting said second

and third nodes, and having a regulator terminal connected electrically to said grounded node,

wherein the regulated direct current voltage is provided to said direct current brushless fan motor through said third and grounded nodes.